

Special Issue

Mechanical Behaviour of Austenitic Stainless Steels

Message from the Guest Editors

Stainless steels were discovered more than a century ago. They are high-alloy steels that have excellent corrosion and heat resistance, combined with their good mechanical properties over a wide range of temperatures.

Concerning their mechanical properties, the austenitic crystals are face-centered cubic, which makes them very tough and ductile, and also very versatile. Their engineering scale response to mechanical loading, both during processing and in service, is highly dependent on their crystallographic texture and on microstructural features, particularly martensitic induced transformation. Nowadays, thanks to advanced characterization tools such as FIB, EBSD, and nano-indentation, a deeper insight into the micro-mechanisms that determine the mechanical behavior is possible.

In this Special Issue, an open-access forum is provided for publishing original papers that investigate various aspects of the mechanical behaviour of austenitic stainless steels, including both research and review papers, informing readers about the latest ongoing research and development activities, from prior history to the current state-of-the art.

Guest Editors

Prof. Dr. Antonio Mateo

1. Department of Materials Science and Engineering, Universitat Politècnica de Catalunya, 08034 Barcelona, Spain
2. Center for Research in Structural Integrity, Micromechanics and Reliability of Engineering Materials, CIEFMA, Avda. Eduard Maristany, 10-14 08019 Barcelona, Spain

Dr. Gemma Fargas

CIEFMA—Department of Materials Science and Engineering, Universitat Politècnica de Catalunya, Escola d'Enginyeria de Barcelona Est (EEBE), Eduard Maristany 10-14, 08019 Barcelona, Spain

Deadline for manuscript submissions

closed (31 July 2019)



Crystals

an Open Access Journal
by MDPI

Impact Factor 2.4
CiteScore 5.0



mdpi.com/si/24159

Crystals
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
crystals@mdpi.com

[mdpi.com/journal/
crystals](https://mdpi.com/journal/crystals)





Crystals

an Open Access Journal
by MDPI

Impact Factor 2.4
CiteScore 5.0



[mdpi.com/journal/
crystals](https://mdpi.com/journal/crystals)



About the Journal

Message from the Editor-in-Chief

Welcome to *Crystals*, the journal dedicated to the fascinating world of crystallographic research! Crystals are more than mere decorative elements; they hold the key to understanding the fundamental structure of matter. Our mission is to explore the crucial significance of this research across various fields. From medicine to technology, chemistry to geology, crystals play a vital role. Their structure provides insights into new advanced materials, innovative drugs, and groundbreaking technologies. Through *Crystals*, we delve into the microscopic world to discover solutions that will shape the future. Join us on a journey through the *Crystals*, where science merges with beauty and innovation.

Editor-in-Chief

Prof. Dr. Alessandra Toncelli

Department of Physics, University of Pisa, 56126 Pisa, PI, Italy

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), Inspec, Ei Compendex, CAPus / SciFinder, and other databases.

Journal Rank:

JCR - Q2 (Crystallography) / CiteScore - Q2 (Condensed Matter Physics)